

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus for measuring deformation of a surface of a pipe comprising a detector capable of directly detecting changes in the radius of a pipe and a plurality of guides for guiding the detector along the pipe in a direction parallel to a longitudinal axis of the pipe, the guides comprising rotatable members spaced apart from the detector and arranged to contact a surface of the pipe when the detector is in contact with the pipe, wherein said guides are respectively provided on each side of the detector, the rotatable members of the guides and the detector being positioned substantially along an arc such that in use, the detector and the guides are in contact with the pipe surface at different points around its circumference, and ~~the guides and the detector span~~ a circumferential distance that is between each said rotatable member of the guides and the detector being smaller than a radius of the arc, whereby an output related to the deformation of the pipe surface is derived from output of the detector.

2. (Original) An apparatus as claimed in claim 1, wherein the detector is arranged to measure the distance between a region of the pipe adjacent the detector and a part of the apparatus.

3. (Original) An apparatus as claimed in claim 2, wherein the detector is arranged to be placed in contact with the surface of the pipe and is moveable in the radial direction of the pipe such that the deformation of the pipe surface may be determined from the displacement of the detector.

4. (Previously Presented) An apparatus as claimed in claim 1, wherein the guides comprise magnets arranged to hold the apparatus in position against a steel pipe.

5. (Previously Presented) An apparatus as claimed in claim 1, wherein the detector comprises a rotatable member that is arranged to roll over the surface of the pipe.

6. (Previously Presented) An apparatus as claimed in claim 5, wherein the rotatable member of the detector is movably mounted in a housing and each said guide member is mounted on an arm extending laterally from the housing.

7. (Previously Presented) An apparatus as claimed in claim 5 comprising measurement means for measuring the displacement of the rotatable member of the detector in relation to the housing.

8. (Previously Presented) An apparatus as claimed in claim 1 wherein said apparatus further comprises transporting means to transport the detector along the pipe.

9. (Previously Presented) An apparatus as claimed in claim 1, arranged to measure the distance traveled by the apparatus along the pipe.

10. (Original) An apparatus as claimed in claim 9, wherein the distance traveled is determined by measuring the number of rotations of a rotatable member engaged with the pipe.

11. (Currently Amended) An apparatus for detecting deformation of a surface of a pipe comprising:

(i) a detector capable of detecting changes in the radius of a pipe when placed in contact with the surface of the pipe, said detector being moveable in a radial direction of the pipe at the point of contact;

(ii) a guide assembly capable of guiding the detector along the surface of the pipe in a direction parallel with the longitudinal axis of the pipe, wherein the guide assembly comprises rotatable members provided on each side of the detector being positioned substantially along an arc such that in use, the detector and the ~~guides~~ rotatable members are in contact with the pipe

surface at different points around its circumference, ~~the guide assembly and the detector span a~~  
circumferential distance ~~that is~~ between each said rotatable member being smaller than a radius  
of the arc; and

(iii) measurement means capable of measuring the radial displacement of the detector,  
whereby to produce an output related to the deformation of the pipe surface.

12. (Previously Presented) A method of measuring the deformation of a surface of a  
pipe using the apparatus as claimed in claim 1.

13. (Previously Presented) A method of measuring the deformation of a surface of a  
pipe using the apparatus as claimed in claim 11.